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The determinants of IPO firm prospectus length in Africa

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Abstract

This paper studies the differential impact on IPO firm listing prospectus length from increasing proportions of foreign directors from civil as opposed to common law societies and social elites. Using a unique hand-collected and comprehensive sample of 165 IPO firms from across 18 African countries the evidence suggests that increasing proportions of directors from civil code law countries is associated with shorter prospectuses while the opposite is true for their common law counterparts. Furthermore increasing proportions of directors drawn from elevated social positions in indigenous society is related to increasing prospectus length in North Africa while being insignificant in SSA.

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1. Introduction

The increasing globalisation of financial markets and impetus to attract foreign investment capital and enhance domestic liquidity has underscored the importance of accurate and timely firm-level disclosures through detailed listings prospectuses as well as on-going commitments such as annual reports and financial reporting that are obligatory to maintaining a stock exchange listing (Cottle et al., 1989). However while development policy in Africa as with elsewhere has focussed on the harmonization of accounting standards, listings criteria and financial reporting the importance of the deeper institutional environment underlining the social context of the regulatory requirements has been largely overlooked in the literature (Fogarty and Rogers, 2005). Hearn (2013) undertook a recent study of the institutional determinants of IPO firm prospectus length in a cross-country comparative setting with a sample drawn from across Africa. However this was limited to well established macro-institutional

measures. However deeper consideration of the indigenous institutional environment facilitates understanding of considerable cross-country variation in enforcement of disclosure practices (Hope, 2003) as well as the degree of successful adoption of micro-Anglo Saxon (for example US, UK and Netherlands) as opposed to macro-continental (for example France, Germany and Portugal) accounting practices as outlined by Nobes (1983). As such the first contribution to the literature is in underscoring the role and importance of institutions in shaping disclosure within the developing context of Africa.

There is a considerable amount of research in accounting literature focussing on quality and timeliness of listed firm's disclosure in enhancing liquidity through a reduction of bid-ask spreads (Soltani, 2002), improving cost of equity and cost of capital (Armstrong et al., 2011) and increasing post-IPO equity prices (Hanley and Hoberg, 2010), thereby indicating quality and a reduction of inventory risk (see Stoll, 2000 for complete discussion relating to inventory risk of market makers). However much of this research focuses on secondary trading markets albeit with the exception of Hanley and Hoberg (2010) that concentrates on initial primary offerings (IPOs) with all focussing on single market studies primarily in US and Europe. Recently a separate and distinct cross-country comparative sub-literature has evolved distinguishing between disclosure practices and enforcement of accounting standards, exemplified by Hope (2003), which builds on the accounting practice distinctions of earlier work by Nobes (1983) between micro-Anglo Saxon and macro-continental European systems. These distinctions themselves build on Gray's (1988) theory of cultural influence in accounting, itself drawing inspiration

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from the inaugural cross-cultural research of Hofstede (1980) which explored four societal traits, namely individualism, power distance, uncertainty avoidance and masculinity, across 40 countries. Nobes distinguishes between macro-continental and micro-Anglo Saxon with the former being characterized by relatively weak accounting professions, inactive equity markets, and with relatively uniform and inflexible practices that are legalistic and tax-based, which are also detailed as “code law countries” in Mueller et al. (1991), while the latter are determined by weak governmental influence, strong accounting professions, active markets and a focus on provision of detailed earnings and valuation information for external stakeholders (Beattie and Jones, 2001).

A very recent evolution in accounting literature in Armstrong et al. (2010) relates levels of disclosure to the amelioration of informational asymmetry between principals (owner-shareholders) and agents (incumbent managers) drawing on corporate governance mechanisms that mitigate some of these agency costs given the viewpoint of the firm in being a complex nexus of contractual relations amongst stakeholders (Jensen and Meckling, 1976). Armstrong et al. (2010) adopt the view that the firm’s contractual arrangements, in particular those relating to informal contracting implicit in information disclosure, evolve together with the wider corporate information environment in resolving agency conflicts and alleviating agency costs. This builds on the extensive literature regarding the role of the board of directors as a governance mechanism for alleviating agency costs between managers and directors (Fama and Jensen, 1983) as well as between insider (executive) directors, charged with decision-making and strategy, and outsider (nonexecutives), charged with decision monitoring on behalf of principals or shareholders. This underscores the view in agency theory of the board of directors in mitigating the downside risks associated with the increasing agency between dispersed minority external principals entering the organizational structure for first time at IPO as principals and incumbent agents. In particular the role of nonexecutives is ascribed with importance in their role of monitoring executives and management on behalf of the new external principals at IPO and thereafter (Jensen and Meckling, 1976). These central tenets of the agency perspective in having been developed in the large common law US equity market have largely shaped the Anglo-Saxon (US/UK) shareholder value model of governance. This in itself is founded on English common law legal and judicial systems as well as an environment structured by political, governmental and more generally institutions derived from the US and UK. This generally favours the primacy of capital markets as being the central form of external finance for firms with the underlying obligation to maximizing protection of property rights of minority investors (La Porta et al., 1998, 2000). In contrast the dominance of institutions centred on French civil code law which strongly influenced the legal systems of Spain and Portugal favour legal, political and governmental apparatus that enhances centralized control, in particular that of the state, over and above that of the individual. As such La Porta et al. (1998, 2000) ascribe this emphasis, together with their relegation of judiciary to a more administrative role of law formed by central legislators rather than a competitive case

-by-case process based on precedent in common law jurisdictions, as inferring significantly weaker protection of property rights of minority external investors. The transplantation of institutional legal, judicial, political and governmental frameworks during colonial expansion of European nations as well as their wholesale adoption by some societies to achieve economic competitiveness (La Porta et al., 2008) has inferred a considerable degree of commonality amongst otherwise geographically dispersed Anglo, Franco and Lusophone countries across Africa. Given the significant differences in individuals perceptions of reality influencing their decision making processes, subject to their bounded rationality, behavioural decision theory, which is part of the wider socio-cognitive perspective (Stein, 1997; Langevoort, 1998), provides a useful theoretical framework in understanding differences between individuals originating from civil code law as opposed to common law countries. These differences are due to the underlying institutions underscoring each environment being encompassed in very different cognitive structures with directors from civil code law countries placing less emphasis on implementing mechanisms protecting minority external shareholders than their common law counterparts. These differences have significant implications for agency costs, in part reflected in levels of informational disclosure to external principals and the length or size of IPO prospectuses, taken as representative of levels of information disclosure (following Li, 2008). As such my second contribution to the literature arises through an application of two complementary theoretical perspectives: that of behavioural decision and agency theories in ascribing differences between board members from civil code as opposed to common law institutional backgrounds and their impact on the size IPO prospectuses.

A final further extension of this approach in attributing differences between directors in accordance to the institutional environments in their countries of origin is in considering the institutional environment of directors from social elites in local indigenous societies. While a common feature of countries from across Africa at independence was the presence of a social elite to whom former colonial authorities bequeathed state machinery such as legal, judicial, political and governmental apparatus there are significant institutional differences between North and Sub Saharan African sub regions. The former is characterized by the presence of extended family networks and their pervasive influence on pyramidal ownership and extensive cross-shareholdings amongst firms within local business environment (Hearn, 2011). The elevated role of family in the economy is partly due to the prevalence of classical Islamic institutions and social morality values within the underlying societal matrices of North African countries (Kuran, 2004). This also serves as an effective means in facilitating inter-generational transfer of wealth and capital given otherwise complex inheritance rights under classical Islamic law (Kuran, 2004). However the governance environment centred on the separation of ownership and control engendered through extended family networks also infers considerable potential for expropriation of minority outsider investors (Claessens et al., 1999, 2000). The dominance of the North African regions political economies by extended family networks has been highlighted through the very recent social

and political upheaval across the region collectively referred to as the Arab Spring (BBC news, 2011). This is in line with earlier work by North (1991) who argued that the capture of domestic polity and state institutions by narrow interest groups with considerable private benefits of control ultimately generated economic stagnation. This is the logical result through their lack of incentive to engage in effective reforms that would otherwise result in a more equitable redistribution of wealth across society. Lavelle (2001), Joireman (2001, 2006) and Hearn and Piesse (2009) find evidence that the domination of polity as well as legal, judicial and governmental apparatus by social elites empowered at independence is also prevalent across Sub Saharan Africa (SSA). However additional complexities underscore these countries. Often the legal and judicial system bequeathed by former colonial metropolises was focussed solely towards the goal of subjugating and controlling the indigenous population given the importance of the region in terms of its extractive industry in colonial trading networks (Joireman, 2001). The informal institutional environment is largely formed on communitarian values engendered within Ubuntu philosophy (Rossouw, 2009) engendering social and economic outcomes at odds with institutions centred on Western philosophical constructs such as those associated with common and civil code law. Furthermore many countries across SSA had dual legal systems where indigenous conflict resolution mechanisms, applicable to the majority of population, operated side-by-side with legal, judicial and governmental institutions designed to promote interests of narrow colonial administrations. Early post-independence policy maker's sought to wholly disband the former indigenous systems and extend the systems inherited from former colonial metropolises (Joireman, 2001) with the net result of further disenfranchising indigenous population. This has largely resulted in the further empowerment of social elites that inherited control from former colonial administrations following independence. Consequently the SSA region has some of the highest transactions costs in the world through an incongruous fit between many newly formed countries informal institutions and societal matrices based on traditional structures, values and beliefs and narrow largely incomplete formal institutions formed on archaic versions of elements of law and governmental bureaucracy designed to engender extractive industries that were centrepiece to colonial administration. This has also resulted in business environments being characterized by dense social networks and orientation towards relationships in order to mitigate these transactions costs (North, 1989) which promotes firms raising finance through internal sources or from relationship based means such as business angels and the banking sector (Kenny and Moss, 1998) rather than external capital markets. These issues have contributed considerably to the lack of an external market finance culture across the SSA region as well as the underdeveloped nature and inactivity of the regions stock markets. In the light of the importance of internal or relationship based finance across SSA and the presence of extended family networks to pool and coordinate resources in North Africa individuals and in particular directors are likely to place less emphasis on the attraction of minority external investors that form the centrepiece of external financing models. As such the

third contribution to the literature is in a unique assessment of the impact of directors from an indigenous social elite background on amounts of disclosure, revealed through the length of IPO listing prospectuses.

The remainder of this article comprises of four sections. The next section outlines the data while Section 3 outlines the hypotheses, literature support for the variables, and methodology. Section 4 discusses results while the final section concludes.

2. Data

The dataset construction involved two sequential steps. The first involved forming an accurate and comprehensive list of Initial Primary Offerings (IPOs) to have been undertaken across the North African markets of Algeria, Egypt, Morocco and Tunisia and the Sub Saharan African (SSA) markets of Cape Verde Islands (Bolsa de Valores de Cabo Verde), Cameroon (Bourse de Douala), BRVM¹ (Cote d'Ivoire), Malawi, Kenya, Uganda, Tanzania, Zambia, Namibia, Botswana, Mozambique, Mauritius (main board) and Ghana for the period of 2000–2011. Nigerian lists were only available from 2002 to 2011. The main board of the stock exchange of Mauritius was selected while the more recently established development board was omitted owing to the necessity of including genuine IPOs as opposed to registrations and introductions that infer little true attempt at ownership diversification and which are more prevalent on this lower tier of listing. The primary source for lists were the national stock exchanges and their associated websites and these were cross checked with lists sourced from major brokerage houses to ensure accuracy in the case of Nigeria and Zambia. The three listings on the embryonic Algerian exchange were undertaken in the initial period following inception between 1998 and 2000 and have been included. This resulted in a list of 236 listings having taken place across Africa.

The second stage involved the procurement of IPO prospectuses that entailed the listing of ordinary shares with single class voting rights thereby excluding preferred stock, convertibles, unit and investment trusts as well as readmissions, reorganizations and demergers and transfers of listings between main and development boards. Flotation prospectuses were hand-collected from financial market regulator websites for Algeria and for Morocco while a combination of Thomson Corporation Perfect Information and Al Zawya databases were used to source Egyptian prospectuses. Al Zawya database, the national stock exchange and direct contact with individual firms were used to source prospectuses for Tunisia. Similarly in SSA prospectuses were hand-collected from the Ghana and Tanzania (Dar Stock Exchange) stock exchanges and Bolsa de Valores de Cabo Verde (Cape Verde Islands exchange) as well as from the

¹ Bourse Regionale des Valeurs Mobilières (BRVM) was established in 1973 as the Bourse de Abidjan in Cote d'Ivoire. However, given the economic and monetary union of Francophone West African countries (UMEO) the local exchange was extended in 1998 to a regional basis and participation was encouraged, both in new listings as well as investment. Union Monétaire et Économique de l'Afrique de l'Ouest (UMEO) countries include Cote d'Ivoire, Benin, Togo, Burkina Faso, Mali, Niger, Senegal and Guinea-Bissau.

stock exchange website for the Bourse de Douala (Cameroon exchange) (DSX website, 2010) while the Thomson Corporation Perfect Information database was used in the first instance to source Nigerian, Malawian and Kenyan prospectuses. This was further augmented by sourcing individual prospectuses from the national stock exchanges and individual firms although response rates were low in sourcing prospectuses direct from firms themselves. Pangea Stockbrokers (Zambia) as well as individual floated firms were the source of prospectuses for the Zambian stock market. A final source in the case of SSA was African Financials website (African Financial website, 2011). This final stage resulted in a sample of 165 IPOs to have occurred across Africa. Share prices were obtained from Bloomberg, DataStream and direct from the national stock exchange in Cape Verde and Cameroon as well as and Al Zawya for Egypt and Tunisia and the national stock exchange in Algeria. US\$ exchanges rates were obtained from Bloomberg.

3. Methodology

This study is focussed on the internal firm-level board governance, performance and ownership and external legal environment quality determinants of IPO firm prospectus length within the developing region of Africa. This region is characterized by narrow political economies largely controlled by social elites empowered at independence from colonial metropolises with business environments dominated by dense social networks and relationships. These dense social networks act to reduce transactions costs (North, 1990) which are exceptionally high given the incomplete legal, judicial and governmental institutions and largely inhibit externally sourced finance (Joireman, 2001). However there is considerable variation in institutional quality, levels of development of capital markets, and ability of firms in accessing viable cost effective sources of external finance. This merits the study of the determinants of IPO prospectus length first on a comprehensive African sample followed by the splitting of the sample between North African region and its Sub Saharan African counterpart. This splitting of the sample is justified by the evidence that North and Sub Saharan African regions have very different business environments with equally contrasting informal institutional societal matrices (Hearn, 2011, 2012). However a major consideration in the smaller datasets of IPO firms inherent in Africa is the effect of small sample bias on the statistical inference of models used. Attempts to mitigate these concerns centre on the employment of unbalanced pooled cross sectional OLS models that draw statistical strength from both longitudinal and cross sectional elements as well as the use of a smaller number of independent variables in line with recommendations in Good and Hardin (2009). The reduction in the number of independent variables is even more important owing to the presence of missing data in some of the IPO firms that is itself responsible for the small sample sizes encountered in the models. Consequently the effects of small sample bias should be taken into consideration when interpreting the results.

3.1. IPO firm prospectus length

The benefits of using dependent variable of natural logarithm of IPO prospectus length (in pages) is that this can be attributed to levels of disclosure by the firm which facilitate the wider study of levels of disclosure to internal board governance as well as firm performance and ownership and wider still country-level legal quality measures. The length of IPO prospectus is defined as:

$$\text{Ln(IPO prospectus length)}_i = \text{Ln}(\text{number of pages of document}) \quad (1)$$

The use of the natural logarithm of the number of pages of prospectuses is necessitated by skewness in number of pages across firm's prospectuses and some extreme values. This follows from the employment of similar techniques in Li (2008) owing to the considerations in handling length (measured in words) of annual reports. Equally the use of natural logarithm transformed prospectus length facilitates the measuring of proportionate effects of variables on prospectus length through the regression coefficients rather than the more bulky absolute size effect as would otherwise be the case in non-log transformed data. This is also similar to the techniques used in the related study of Hearn (2013).

3.2. IPO firm board governance determinants of IPO prospectus length

The mainstream international corporate governance literature views an IPO as being the first major "liquidity event" in the life cycle of fast growing firms when founders and initial investors (corporate insiders) begin the process of realizing the value of their ownership stake in the firm (Brav and Gompers, 2003). However the agency theory perspective views this dispersion of ownership away from the concentrated control of the initial entrepreneur-owner as giving rise to potential downside risks and agency costs from a misalignment of interests between incumbent managers and executives (agents) and external minority investors (principals) (Jensen and Meckling, 1976). Adverse selection and moral hazard problems arise from the asymmetric information between new owners (investors) and incumbent managers (agents) as there are incentives for the latter to mislead or even worse expropriate the former (Bruton et al., 2010; Boulton et al., 2009). As such the board of directors itself can be viewed as being a tool which can act to better align incentives of various principals and agents and facilitate communication and information disclosure thereby reducing asymmetric information (Jensen and Meckling, 1976). However while the agency theoretic perspective ascribes a decision monitoring and control role for the board in terms of regulation of the firm's internal affairs evidence from the field of cognitive psychology infers that directors from countries with fundamentally different legal traditions as well as social and political governance structures will have different impacts in their functions within the board (Stein, 1997; Langevoort, 1998). In

particular cognitive dissonance has been advanced as a basic concept in social psychology in referring to the tendency of individuals to unconsciously adjust their beliefs and attitudes to conform to voluntary choices previously made (Akerloff and Dickens, 1982; Langevoort, 1998). Behavioural decision theory encapsulates these constructs in advancing a perspective that humans are subject to heuristics, biases and other subjective reasoning that are both systematic and predictable across a group or society that cause departures from rational decision making processes envisaged in neoclassical economics (Langevoort, 1998). This socio-cognitive perspective of the governance structures governing human behaviour within a society relies heavily on institutions and their role in enabling individuals otherwise constrained or bounded in their ability to interpret all information available (Kahneman and Tversky, 1982; North, 1989) as well as provide further subjective guidance on the interpretation of situations and information arising from decisions which in turn informs the progressive modification of these underlying mental constructs in terms of shared inter-subjective perceptions of reality across a society (Stein, 1997). Institutions inform the establishment of routines and patterns of behaviour which through an on-going process of replication and modification across transactions within a society can outlive the historical context that gave rise to the establishment of the institutions in their original form. Given this evidence of the pervasive nature of deeper routines and inter-subjective perceptions of reality arising from across a society shaping human choices through bounded or constrained decision making then individuals from fundamentally different societies are likely to reflect contrasting norms, values and belief structures (Anderson, 1990; Williamson, 2002).

One consequence arising from this socio-cognitive perspective, or behavioural decision theory, is that individuals from countries with common law legal origins, together with the political, governmental and institutional structures supporting this legal form will have fundamentally different perceptions of reality from those from civil code law countries. In particular Coffee (2000) ascribes differences between common law and civil code law systems in terms of reliance in the former on law being formed from a competitive process of competing case arguments and precedent with judge and judiciary presiding over process, while in the latter system law is passed largely by legislature and judges relegated to a more administrative role. Equally commercial and regulatory law as well as political and governmental systems in civil code law countries tend to engender the rights of centralized authority of the state over those of individuals (La Porta et al., 1998, 1999, 2000, 2008). Contrastingly La Porta et al. argues that common law legal, political and governance systems are more protective of the rights of minority individual. As a consequence the evidence from La Porta suggests that common law countries ascribe a greater role for external financial markets through their enhanced protection of outsider minority investors than their civil code law counterparts where finance is obtained either through internal means or relationship orientated bank-based financial systems. These differences between common law and civil code law countries shape institutions that inform the inter-subjective perceptions

of reality across societies and the mental model constructs of reality of individuals that originate from within them. As a consequence behavioural decision theory will impact on the potential agency costs between minority outside investors (principals) participating for first time in IPO firm's divestment of ownership and incumbent management and executives (agents) through the structure and composition of the board of directors. In particular differences between individuals originating from civil code law as opposed to common law societies with their contrasting behaviours and perceptions of reality perpetuated through institutions common to each society will have a considerable impact on agency relationships within an organization. In particular a combination of behavioural decision theory and the more conventional agency perspective infers that increasing proportions of directors from civil code law societies will likely place less emphasis on protection of minority outsider investors in contrast to centralized control by dominant block-shareholder. This lack of adherence to external market model of financing will also have implications on the amount of disclosure with this being decreased in relation to the lack of emphasis placed on role of minority external (outsider) investors. In the light of these theoretical predictions I test the following hypothesis:

H1. The ratio of foreign directors from civil code law countries to total board size is negatively associated with IPO-firm prospectus length.

A similar conjecture is derived from behavioural decision theory in terms of the proportion of directors from common law societies where accepted societal behavioural norms, values and shared beliefs infused into informal institutions, such as business culture and routines, as well as general understanding of formal codified legal statutes (Stein, 1997; Langevoort, 1998). This leads to an enhanced emphasis of their perceptions of the importance of the role of minority investors as well as their protection through increased amounts of disclosure. As a result of the familiarity with more market-orientated external finance systems directors from common law countries are more likely to adhere to shareholder value governance models. These being informed by agency theory would seek to increase disclosure thereby incentivizing firm insiders (agents) to act in the interests of external (outside) investors in accordance to the ownership diversification model envisaged by agency theory (Jensen and Meckling, 1976). Consequently I test the following hypothesis:

H2. The ratio of foreign directors from common law countries to total board size is positively associated with IPO-firm prospectus length.

The consideration of the role of indigenous high society directors and their impact on the effectiveness of the board as a control and monitoring device involves drawing from North (1989) in an application of transaction cost economics to advance political theory. In particular North argues that while very narrow political economies underscored by dense social networks mitigate transactions costs associated with domestic financing through information engendered within localized relationships, these do not promote strong third party contracting necessary to stimulate industrialization and larger scale production. Joireman (2001,

2006) characterizes African political economies in being narrow and dominated by an often narrow group of social elites that took over the legal, political and governance institutions immediately following independence from former colonial metropolises. Given the considerable private benefits of control at a state-level North (1989) argues that institutional inertia will arise from a lack of incentives to enact real reforms that would otherwise redistribute the considerable wealth accumulation and opportunities of those narrow interest groups.

Following on from the above argument indigenous high society directors are more likely to be in positions that will enable their ability to benefit from private benefits of control of firms and less incentivized to disclose information given the lack of media and analyst scrutiny in domestic African markets owing to their underdeveloped nature. Equally given the dense social networks characterizing many of the regions markets finance is more likely to be relationship-based with little regard for external capital markets thereby mitigating the necessity for more detailed disclosure and hence prospectus length. Equally given the domestic indigenous institutional environment is more likely to favour relationship-based finance given the dense network of social networks forming many African business environments (North, 1989) high society directors are less likely to be incentivized to facilitate information production nor its acquisition by external (outsider) shareholders. Consequently I test the following hypothesis:

H3. The ratio of indigenous high society executives to total board size is negatively associated with IPO-firm prospectus length.

3.3. Hypothesis variables

Ratio of foreign directors from civil code law countries to total board size: This is defined as the number of directors from civil code law origin countries, as defined in La Porta et al. (2008), to total board size.

Ratio of foreign directors from common law countries to total board size: This is defined as the number of directors from common law origin countries, as defined in La Porta et al. (2008), to total board size.

Ratio of indigenous high society executives to total board size: This is defined as the total number of directors that currently or have occupied positions of elevated social status within indigenous societies, namely military, governmental (including both secular and indigenous), university (professorial and above) and commercial, to total board size.

3.4. Control variables

Five groups of controls were included in the model: industry, board, firm, institutional quality and ownership.

3.4.1. Industry controls

Three industry controls are used. Each are dichotomous variables that equal 1 if the IPO firm either operates within an extractive industry (mining, oil, oil services), finance

(financial services, banking, real estate), or technology (technology and telecommunications) and 0 otherwise. These are similar to the industry controls used in Hearn (2012) in a study of IPO underpricing in Sub Saharan African markets.

3.4.2. Board controls

3.4.2.1. Size. Board size is defined as the total number of executive and non-executive directors and includes those designated as executive directors in civil code markets where boards are unitary in structure and supervisory in function. Board size follows Jensen (1993) who suggests that larger boards lack cohesiveness and reduces directors' ability to communicate and effectively coordinate corporate strategy thus increasing agency costs. Smaller boards are more likely to be the result of technological and organizational change that leads to reduced costs and corporate downsizing. Thus, board size has an established impact on agency costs and asymmetric information.

3.4.2.2. Independence. Board independence is defined as the proportion of non-executive directors to total board size. Board independence follows Boyd (1994), Kosnik (1990), Westphal and Zajac (1994) and Conyon and Peck (1998) who claim the role of nonexecutives is to monitor decision-making processes by the executives, thereby protecting minority outsider shareholder interests.

3.4.3. Firm determinants

3.4.3.1. Size. The natural logarithm of firm revenues in the pre-IPO year in US\$ was obtained from the IPO prospectus. Firm revenues are long established in the literature as a control for the variation in size as larger firms have greater economic growth opportunities (Rosen, 1982; Smith and Watts, 1992). Equally the complexity of the firm's task environment, which is a feature of high revenue generating firms (Rosen, 1982; Smith and Watts, 1992) with significant growth opportunities, infers that managers and executive directors often have considerable firm-specific intrinsic information which generates additional information acquisition costs in communicating this to nonexecutives (Demsetz and Lehn, 1985; Coles et al., 2008) who act on behalf of outsider shareholders.

3.4.3.2. Return on assets (ROA). Variations across the sample in firm performance are controlled through the use of accounting return on assets (calculated as ratio of earnings before tax to total assets and delineated ROA).

3.4.4. Institutional quality

The quality of the institutions is measured using the World Bank Governance (2011), developed by Kaufman et al. (2009). These are a set of six indices that capture aspects of state-level institutions and citizens' perceptions of them. These were first constructed in 1996, then updated every two years until 2002 and annual thereafter. The indicators are compiled from the responses on the quality of governance obtained from 35 data sources in 33 organizations and are drawn from a large sample of firms, citizens and experts in industrial and emerging countries, with added information from institutes, think tanks,

non-governmental organizations, and international organizations (Kaufman et al., 2009). The six indicators are constructed using an unobserved components methodology (see Kaufman et al. (2009)), with values ranging from approximately -2.5 to $+2.5$ and where higher values denote better governance outcomes.

The six governance indices are defined by the World Bank (World Bank Governance website, 2011) as follows:

1. Voice and accountability – capturing perceptions of the extent to which a country's citizens are able to participate in selecting their government, as well as freedom of expression, freedom of association, and a free media.
2. Political stability and absence of violence/terrorism – capturing perceptions of the likelihood that the government will be destabilized or overthrown by unconstitutional or violent means, including politically-motivated violence and terrorism.
3. Government effectiveness – capturing perceptions of the quality of public services, the quality of the civil service and the degree of its independence from political pressures, the quality of policy formulation and implementation, and the credibility of the government's commitment to such policies.
4. Regulatory quality – capturing perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development.
5. Rule of law – capturing perceptions of the extent to which agents have confidence in and abide by the rules of society, and in particular the quality of contract enforcement, property rights, the police, and the courts, as well as the likelihood of crime and violence.
6. Control of corruption – capturing perceptions of the extent to which public power is exercised for private gain, including both petty and grand forms of corruption, as well as capture of the state by elites and private interests.

An aggregate institutional quality index was formed by first rescaling each governance indicator to fit on a scale of between 0 and 10 using Eq. (1):

$$\left(\frac{x_{jt} - X_{\min}}{X_{\max} - X_{\min}} \right) * 10 \quad (2)$$

for indicator i in country j at time t . These were then summed to create a single governance indicator for each country. This aggregate institutional quality index has also been used to capture the effects on often considerable variations in institutional quality in the recent literature on developing country IPOs by Hearn (2012).

3.4.5. Ownership

The use of four ownership categories, namely foreign partner, family, state and corporate block shareholder is necessitated by the need to control for each of these entities that commonly cause ownership concentration in developing regions (La Porta et al., 1998; Claessens et al., 2000; Fan and Wong, 2002). These also account for the anticipated retained ownership in the focal

IPO firm which in turn is representative of the multiple agency influence on each category of owner where each is subject individually to agency with their own external principals that often have incongruous motives (Arthurs et al., 2008).

3.4.5.1. Corporate block-shareholder. This is the percentage ownership of the firm pre-IPO in the form of corporate block-shareholding entities. This takes into account the influence in terms of governance arising from large block-shareholding entities and has been used recently in developing context by Hearn (2012).

3.4.5.2. Family. This is the percentage ownership in the firm pre-IPO by family entities. This takes into account the influence arising from dominant family groups with members bound by altruistic motives (Hearn, 2011).

3.4.5.3. State. This is the percentage ownership in the firm pre-IPO by state entities which includes state controlled local development authorities and institutions allied or controlled to central government. This controls for a significant amount of IPOs to have been privatizations or involving at least some degree of state involvement.

3.4.5.4. Foreign partner. This is the percentage ownership in the firm pre-IPO by foreign partner entities. Given the prevalence of foreign partners in internally sponsored joint venture operations which are common in the African business environment (Boateng and Glaister, 2002), this controls for the effects of multinational activity and influence within the sample.

3.5. Methods

Pooled cross sectional OLS regressions were used to test these hypotheses. These were first applied to comprehensive African sample and then to the two sub-samples of North Africa and Sub Saharan Africa. These take the form:

$$\begin{aligned} \text{Log(IPO prospectus length)}_t = & \alpha \\ & + \beta_1 \text{ board governance}_t \\ & + \beta_2 \text{ industry controls}_t \\ & + \beta_3 \text{ board controls}_t \\ & + \beta_4 \text{ firm controls}_t \\ & + \beta_5 \text{ institutional quality}_t \\ & + \beta_6 \text{ ownership}_t \\ & + \varepsilon_t \end{aligned} \quad (3)$$

where Log (IPO prospectus length) relates to the natural logarithm of IPO prospectus page length, in number of pages. Board governance is formed of the three variables central to the hypotheses, namely ratio of foreign directors from civil code law countries to board size, ratio of foreign directors from common law countries to board size and ratio of indigenous high society directors (director's also carrying elevated social status roles in

indigenous society such as military, academic, governmental) to total board size. All other control variables are defined as earlier.

First a regression model is run with only control variables, omitting the board governance variables detailed in hypotheses. Then each of the board governance variables is added recursively to the model containing the controls before a grand regression is run containing all board governance variables together alongside the controls. Finally to account for potential heterogeneity across countries, country fixed effects are applied to the grand regression model.

4. Results

4.1. Descriptive statistics

The evidence from Table 1 reveals considerable differences in IPO prospectus page length alongside numbers of true independent nonexecutives, foreign and high society directors as well as levels of contract enforcement across African countries and regions. Generally North and Southern African regions have the largest prospectuses, with the mean across firms in South Africa being 203.75 pages, Namibia being 162 pages, Botswana being 114 pages while those in Egypt being 150.78 pages, Morocco being 189.03 pages and Tunisia being 191.83 pages. However there is considerable intra-regional variation with the market level mean across Southern African IPO firms in Mauritius being 47 pages, and Mozambique being 34 pages. Country level averages of IPO firms in East Africa range from 105.5 pages in Tanzania to 158 pages in Kenya while the lowest values are in West Africa with Nigeria mean IPO prospectus length being 46.65 pages, Ghana being 86.50 pages, although the Cape Verde Islands is a notable exception in West Africa with market mean prospectus length being 170.50 pages. It is notable that corporate governance legislation and securities market regulation in Cape Verde is significantly influenced by that in Portugal (BVC website, 2011).

The market level mean gross proceeds raised by IPO firms is generally reflective of the size of the markets with the largest and most active markets across the continent, namely South Africa, Nigeria, Kenya, Egypt and Morocco having the highest mean levels. However this trend is not indicative of IPO expenses, which includes all costs associated with the IPO and issuance of stock including auditing and accounting fees, underwriter costs as well as documentation and legal fees. Generally mean IPO expenses are highest between Uganda (US\$ 12,920), Egypt (US\$ 15,240), South Africa (US\$ 11,150) and Malawi (US\$ 14,400). Equally there is considerable variation in institutional quality across the continent although generally the countries of North and Southern African regions have the highest overall institutional quality. Prominent exceptions are Algeria in North Africa, as well as Mozambique and Malawi in Southern Africa, where overall institutional quality is notably lower than that of neighbouring regional countries. Finally while East and West African regions are marked by low institutional quality two notable exceptions are Ghana and Cape Verde Islands where this is on a level with developed Southern and North African countries.

4.2. Impact of board governance attributes on IPO firm prospectus length

The study of regression residuals did not reveal any issues regarding either heteroskedasticity or non-Normality in distributions while minimal correlation between variables mitigates concerns regarding multicollinearity.² The evidence from Table 2 reveals a mixed level of support for all three hypotheses H1–H3 in the pan-African sample of IPOs. The evidence from model 2, where ratio of civil code law directors to board size was included on its own alongside the controls, as well as from the grand regression model 5 reveal a negative relationship and statistically significant (over 95% confidence level) between proportion of civil code law directors on the board to the natural logarithm of IPO prospectus size. However the inclusion of this variable only accounts for a meagre increase in explanatory power over consideration of control variables on their own (in model 1) of 0.24%.

Equally following the application of fixed effects in model 6 the relationship loses its statistical significance at any discernable confidence level. Overall the evidence provides marginal support for hypothesis H1. In contrast the relationship between ratio of common law directors to board size and the IPO prospectus size lacks any statistical significance at any discernable confidence level in the individual model 3 and its grand regression counterpart, model 5. However following the application of country fixed effects this relationship is large, positive and acquires statistical significance at the 90% confidence level inferring some support for hypothesis H2 once the effects of heterogeneity across countries is taken into account. The evidence in relation to hypothesis H3 is more contradictory in nature. The relationship between ratio of social elite (high society) directors to board size and IPO prospectus length is persistently negative across all models, namely model 4 where it is included individually alongside controls, the grand regression model 5 and the grand regression model following application of country fixed effects in model 6. However while this relationship has a statistical significance of just below the 90% confidence level the inclusion of this variable has a substantial impact on explanatory power. Its individual addition to model 5 causes an increase in explanatory power of 11.56% over and above that for the control variables on their own (model 1). This infers some support for hypothesis H3.

Generally the explanatory power of all models is high although the largest increases in this are firstly following the addition of the ratio of social elite (high society) directors and then a second jump in R^2 occurs following the application of country fixed effects to take account of unobservable inter-country heterogeneity in institutions. Equally following the addition of the ratio of social elites to board size variable, two control variables grow in absolute size and attain statistical

² Pearson correlation results for the three samples, namely Africa and then North and Sub Saharan Africa, reveal minimal correlation and statistical significance of correlations between variables. These are available from author upon request.

Table 1
Descriptive statistics for IPO prospectus length, board characteristics and ownership of IPO firms IPO prospectus length is defined as total number of pages making up the last issued prospectus of firm immediately preceding IPO.

	IPO prospectus length			IPO gross proceeds (US\$ '000)			IPO expenses (US\$ '000)			Institutional quality index		
	Mean	Median	Std. dev.	Mean	Median	Std. dev.	Mean	Median	Std. dev.	Mean	Median	Std. dev.
North Africa												
Algeria	48.67	50.00	3.21	9143	6322	10,802	–	–	–	1.593	1.534	0.102
Egypt	150.78	194.00	115.36	1,007,074	237,439	2,384,298	15.24	16.56	12.57	2.537	2.536	0.130
Morocco	189.03	188.00	62.14	84,588	16,311	180,928	2.37	1.54	1.94	2.930	2.941	0.102
Tunisia	191.83	165.50	130.43	18,070	6095	28,062	–	–	–	3.215	3.240	0.085
West Africa												
BRVM/Cote d'Ivoire	38.60	34.00	16.89	14,044	1176	28,806	–	–	–	1.860	2.080	0.304
Cameroon	86.50	86.50	47.38	18,739	18,739	17,721	2.02	2.02	2.82	2.278	2.278	0.000
Cape Verde Islands	170.50	169.50	35.26	5194	2893	5124	–	–	–	3.644	3.502	0.283
Ghana	71.64	75.00	25.74	9217	1942	17,102	4.94	4.14	4.02	3.163	3.256	0.315
Nigeria	46.65	44.50	23.92	164,878	119,914	183,807	5.04	5.00	1.36	1.762	1.835	0.266
East Africa												
Kenya	158.00	148.00	47.39	117,872	48,116	197,521	6.30	5.10	3.49	2.468	2.462	0.016
Uganda	121.00	130.00	50.80	13,950	6500	18,859	12.92	6.42	18.20	2.244	2.212	0.311
Tanzania	105.50	111.00	32.76	17,290	11,136	17,648	5.05	1.85	7.77	2.810	2.938	0.240
Southern Africa												
Mauritius	47.00	47.00	0.00	7129	7129	0	7.28	7.28	0.00	4.227	4.227	0.00
Mozambique	34.00	34.00	0.00	18,349	18,349	0	–	–	–	2.723	2.723	0.00
Botswana	114.00	68.00	106.79	31,312	30,699	28,347	4.12	4.94	2.27	4.259	4.251	0.092
Malawi	93.50	97.00	7.72	16,797	12,061	18,119	14.40	9.61	11.77	2.700	2.848	0.361
Namibia	162.00	162.00	16.97	12,487	12,487	10,411	1.95	1.95	2.75	3.877	3.877	0.226
Zambia	48.67	40.50	32.05	29,842	9347	51,272	4.53	1.47	6.89	2.665	2.707	0.332
South Africa	203.75	153.50	146.85	254,654	80,623	407,917	11.15	11.73	10.77	3.730	3.728	0.165
Legal regime												
Civil code law	162.14	166.00	98.22	169,682.58	12,851.00	879,559.97	4.32	1.59	6.58	2.880	2.941	0.499
Common law	89.45	79.00	65.19	77,310.72	16,003.65	160,098.46	6.25	4.97	6.87	2.608	2.498	0.790

Notes: The data have been sourced manually from the last prospectus lodged with the relevant securities exchange or national regulator immediately prior to listing.

significance. These are a positive relationship between board size and IPO prospectus length which lacks statistical significance at any discernable confidence level and attains significance at 99–90% confidence and a positive relationship between state ownership control (pre-IPO) and the dependent variable which attains statistical significance at 90% confidence level. This behaviour amongst these variables would underscore the evidence from Joireman (2001, 2006) and North (1989) regarding the narrowness of political economies in Africa and domination of these by social elites. The relationship between IPO prospectus length and board size also infers that firms with larger boards are more likely to disclose more. This is intuitively unexpected given the evidence in literature that larger boards are more likely associated with paucity in director communication and coordination leading to a poorer information quality environment (see Hermalin and Weisbach, 2003 and Jensen, 1993 for example). However this finding may be consistent with evidence from Hope (2003) that disclosures are generally more important in business environments and firms characterized by low analyst following, i.e. paucity in informational environment which is characterized both by large boards and particularly the role of large boards in the context of wider institutional deficiencies such as those common across Africa.

More generally there is a persistent positive and highly statistically significant relationship between Technology/Telecommunications industry control and IPO prospectus length which retains statistical significance, size and direction

following application of country fixed effects. A similar positive relationship is observed between extractive industry controls but only following the application of country fixed effects. The persistent large, negative and statistically significant relationship between natural logarithm of firm revenues and IPO prospectus length fits with evidence from the literature where more complex task environments and growth opportunities incentivizes informational disclosure (Rosen, 1982; Smith and Watts, 1992). However a larger negative and generally statistically significant relationship between the firm performance term, accounting return on assets (ROA), infers that the amount of firm disclosure is more highly correlated to larger firms with more complex task environments but with lower levels of financial performance. In terms of institutional quality and there is a persistent large positive relationship between this and IPO prospectus length across all models (model 1–5) at 99–95% confidence level which loses its statistical significance considerably following the application of country fixed effects that take account of unobserved heterogeneity across countries. However following the application of country fixed effects the statistical significance is only marginally below the 90% confidence level inferring that even after unobserved differences across countries are taken into account that the overall quality of institutions is an important factor. Finally there is a positive and statistically significant relationship between family ownership (pre-IPO) and IPO prospectus length across all models inferring some informational disclosure benefits for minority external investors arising

Table 2

The impact of board governance on IPO prospectus size for Africa regression models are pooled cross section OLS regressions relating control variables and board characteristics to natural logarithm of IPO prospectus length (pages). Board governance, economic determinants and ownership variables are as defined in Table 2.

	Log (IPO prospectus number of pages)					
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Intercept	2.174 (6.07) ^{††}	2.250 (6.27) ^{††}	2.173 (6.03) ^{††}	2.191 (7.34) ^{††}	2.322 (7.39) ^{††}	3.240 (4.49) ^{††}
Board governance						
Ratio foreign director civil law		−0.551 (−1.93)^{**}			−0.771 (−2.32)[†]	−0.040 (−0.08)
Ratio foreign director common law			−0.007 (−0.03)		−0.041 (−0.19)	0.523 (1.57)[*]
Ratio social elites				−0.500 (−1.08)	−0.614 (−1.21)	−0.174 (−0.59)
Industry controls						
Technology/telecom industry	0.210 (1.97) ^{**}	0.205 (1.96) ^{**}	0.210 (2.00) ^{**}	0.232 (2.65) [†]	0.223 (2.62) [†]	0.194 (1.75) ^{**}
Extract industry	−0.060 (−0.25)	−0.065 (−0.28)	−0.060 (−0.25)	0.097 (0.55)	0.092 (0.48)	0.164 (1.31) [*]
Financials industry	−0.113 (−0.63)	−0.148 (−0.77)	−0.113 (−0.62)	0.120 (0.85)	0.087 (0.58)	0.112 (1.12)
Board controls						
Board size	0.005 (0.16)	0.006 (0.22)	0.005 (0.16)	0.029 (2.53) [†]	0.031 (2.53) [†]	0.024 (2.13) ^{**}
Board ind. ratio	−0.004 (−0.20)	−0.004 (−0.24)	−0.004 (−0.21)	−0.002 (−0.11)	−0.001 (−0.05)	−0.009 (−0.80)
Firm controls						
Log (revenue)	0.091 (4.19) ^{††}	0.085 (3.71) ^{††}	0.091 (4.06) ^{††}	0.084 (4.70) ^{††}	0.078 (4.15) ^{††}	0.069 (2.46) ^{††}
ROA	−0.698 (−1.53) [*]	−0.848 (−1.76) ^{**}	−0.697 (−1.45) [*]	−0.562 (−1.09)	−0.745 (−1.37) [*]	−0.609 (−1.44) [*]
Institutional controls						
Institutional quality index	0.507 (5.39) ^{††}	0.511 (5.51) ^{††}	0.507 (5.33) ^{††}	0.458 (5.03) ^{††}	0.458 (5.09) ^{††}	0.185 (0.68)
Ownership						
Corp. block own	0.003 (1.03)	0.003 (1.07)	0.003 (1.04)	0.001 (0.38)	0.001 (0.44)	−0.0003 (−0.23)
Family own	0.003 (1.58) [*]	0.003 (1.48) [*]	0.003 (1.56) [*]	0.004 (3.13) ^{††}	0.004 (2.90) ^{††}	0.001 (0.91)
State own	0.001 (0.27)	0.001 (0.24)	0.001 (0.27)	0.003 (1.10)	0.003 (1.28) [*]	0.002 (1.33) [*]
Foreign partner own	−0.004 (−1.50) [*]	−0.004 (−1.13)	−0.004 (−1.37) [*]	−0.005 (−1.69) ^{**}	−0.004 (−0.97)	−0.007 (−1.82) ^{**}
Country fixed effects	No	No	No	No	No	Yes
F-test	4.375 (0.00)	4.158 (0.00)	4.007 (0.00)	6.299 (0.00)	5.757 (0.00)	8.119 (0.00)
Observations	139	139	139	139	139	139
Adjusted R ²	0.2269	0.2293	0.2207	0.3346	0.3425	0.6316
Adjusted R ² (over control variables only)		0.0024	−0.0062	0.1077	0.1156	0.4047

Notes: (1) T-statistics are in parentheses. (2) White cross-section standard errors and covariance (d.f. corrected).

Bold indicates value is greater than zero.

^{*} $p < 0.10$.

^{**} $p < 0.05$.

[†] $p < 0.01$.

^{††} $p < 0.005$.

from family control and influence. However a similarly sized negative relationship between foreign partner ownership (pre-IPO) and IPO prospectus length is as intuitively expected as this infers that the multinational enterprises (MNEs) involved in the joint ventures with local subsidiary firms are more likely to prefer financing from internal means rather than to resort to local external capital markets. As such this minimal interest in local external capital markets is reflected in antipathy towards costly and revealing information disclosures in the form of larger IPO prospectuses.

The evidence relating to the two sub-samples of Sub Saharan Africa and North Africa are between Tables 3 and 4, respectively. These reveal considerable differences between the two African sub-regions. In particular following the disaggregation

of the pan-African sample a similar disaggregation in effects can be seen too. The evidence from the Sub Saharan African (SSA) sub sample (in Table 3) reveals the slight relationship between the ratios of foreign directors from civil code law and common law countries to board size where the latter is negatively related to IPO prospectus length until the application of country fixed effects whereupon this relationship loses its statistical significance.

However the relationship between the latter variable, ratio of common law foreign directors to board size, and IPO prospectus length is positive and statistically significant at 90% confidence level across models 9 and 11 and retains its size, direction and significance even after the application of country fixed effects. It is notable that the increase in explanatory power from the

Table 3

The impact of board governance on IPO prospectus size for Sub Saharan Africa regression models are pooled cross section OLS regressions relating control variables and board characteristics to natural logarithm of IPO prospectus length (pages). Board governance, economic determinants and ownership variables are as defined in Table 2.

	Log (IPO prospectus number of pages)					
	Model 7	Model 8	Model 9	Model 10	Model 11	Model 12
Intercept	2.157 (3.27) ^{††}	2.199 (3.53) ^{††}	2.234 (3.93) ^{††}	2.157 (3.25) ^{††}	2.235 (3.81) ^{††}	3.421 (5.67) ^{††}
Board governance						
Ratio foreign director civil law		−0.654 (−2.48)[†]			−0.512 (−2.71)^{††}	0.235 (0.53)
Ratio foreign director common law			0.523 (1.82)^{**}		0.304 (1.28)[*]	0.818 (1.50)[*]
Ratio social elites				0.020 (0.04)	−0.154 (−0.26)	−0.025 (−0.07)
Industry controls						
Technology/telecom industry	0.249 (1.28) [*]	0.252 (1.37) [*]	0.290 (1.64) [*]	0.251 (1.15)	0.264 (1.37) [*]	0.481 (3.27) ^{††}
Extract industry	0.016 (0.08)	0.020 (0.09)	0.073 (0.38)	0.015 (0.07)	0.061 (0.26)	0.207 (1.19)
Financials industry	0.191 (1.26)	0.193 (1.33) [*]	0.231 (1.54) [*]	0.188 (1.01)	0.236 (1.29) [*]	0.080 (0.54)
Board controls						
Board size	0.015 (0.72)	0.018 (0.90)	0.018 (0.88)	0.015 (0.67)	0.018 (0.80)	0.014 (0.64)
Board ind. ratio	−0.002 (−0.01)	0.006 (0.02)	0.011 (0.03)	−0.009 (−0.02)	0.068 (0.16)	−0.108 (−0.46)
Firm controls						
Log (revenue)	0.069 (2.30) ^{**}	0.061 (2.07) ^{**}	0.057 (1.91) ^{**}	0.069 (2.18) ^{**}	0.059 (1.87) ^{**}	0.021 (0.50)
ROA	0.280 (0.88)	0.391 (0.92)	0.210 (0.62)	0.280 (0.86)	0.322 (0.75)	−0.741 (−1.68) ^{**}
Institutional controls						
Institutional quality index	0.384 (3.72) ^{††}	0.383 (3.68) ^{††}	0.369 (3.79) ^{††}	0.385 (3.49) ^{††}	0.369 (3.36) ^{††}	0.175 (0.76)
Ownership						
Corp. block own	0.001 (0.19)	0.001 (0.36)	−0.0004 (−0.15)	0.001 (0.19)	0.0002 (0.07)	0.001 (0.25)
Family own	0.003 (1.05)	0.003 (1.09)	0.003 (1.10)	0.003 (1.02)	0.003 (1.06)	0.007 (2.23) ^{**}
State own	0.007 (2.08) ^{**}	0.007 (2.09) ^{**}	0.008 (2.48) [†]	0.007 (1.70) ^{**}	0.008 (2.16) ^{**}	0.003 (1.68) ^{**}
Foreign partner own	−0.001 (−0.22)	0.0001 (0.03)	−0.002 (−0.56)	−0.001 (−0.20)	−0.001 (−0.23)	−0.006 (−1.53) [*]
Country fixed effects	No	No	No	No	No	Yes
F-test	2.685 (0.00)	2.719 (0.00)	2.690 (0.00)	2.441 (0.00)	2.358 (0.00)	3.817 (0.00)
Observations	80	80	80	80	80	80
Adjusted R ²	0.2038	0.2205	0.2175	0.1917	0.2050	0.5084
Adjusted R ² (over control variables only)		0.0167	0.0137	−0.0121	0.0012	0.3046

Notes: (1) T-statistics are in parentheses. (2) White cross-section standard errors and covariance (d.f. corrected).

Bold indicates value is greater than zero.

^{*} $p < 0.10$.

^{**} $p < 0.05$.

[†] $p < 0.01$.

^{††} $p < 0.005$.

two models (model 8 and 9, respectively) arising from the individual addition of ratio of foreign civil code law as opposed to foreign common law directors to board size over and above that attributable to the controls on their own is 1.67% and 1.37%. This infers some support for hypotheses H1 and H2. In contrast to the earlier pan-African sample group there is a total lack of statistical significance at any discernable confidence level between the ratio of social elites (high society) to board size and IPO prospectus length. This infers a lack of any support for the role of social elites (high society) directors in enhanced information disclosure within Sub Saharan African region. More generally across the control variables and there is a large, positive and statistically significant relationship between both financials

as well as technology/telecommunications industry control and IPO prospectus length. There is a generally positive and statistically significant relationship between natural logarithm of firm revenue and IPO prospectus length inferring firm size and complexity of operating (task) environment is a factor in determining amount of disclosure. However the relationship between firm performance (ROA) generally lacks statistical significance until the application of country fixed effects which is in contrast to the larger pan-African sample. The aggregate institutional quality control is large, positive and statistically significant across all models 7–11 until the application of country fixed effects when the relationship loses its significance, although this is just below the 90% confidence level inferring some residual importance of

Table 4

The impact of board governance on IPO prospectus size for North Africa regression models are pooled cross section OLS regressions relating control variables and board characteristics to natural logarithm of IPO prospectus length (pages). Board governance, economic determinants and ownership variables are as defined in Table 2.

	Log (IPO prospectus number of pages)					
	Model 13	Model 14	Model 15	Model 16	Model 17	Model 18
Intercept	1.055 (1.03)	1.063 (1.03)	1.138 (1.14)	2.071 (2.89) ^{††}	2.130 (2.82) ^{††}	1.327 (0.58)
Board governance						
Ratio foreign director civil law		−0.175 (−0.31)			−0.205 (−0.43)	−0.316 (−0.60)
Ratio foreign director common law			−0.521 (−0.82)		−0.210 (−0.52)	−0.242 (−0.66)
Ratio social elites				0.441 (0.70)	0.500 (0.74)	0.332 (0.67)
Industry controls						
Technology/telecom industry	0.110 (0.59)	0.107 (0.57)	0.103 (0.55)	0.204 (1.75) ^{**}	0.194 (1.61) [*]	0.124 (1.05)
Extract industry	−0.110 (−0.30)	−0.112 (−0.30)	−0.114 (−0.30)	0.196 (1.11)	0.192 (1.02)	0.188 (1.05)
Financials industry	−0.289 (−0.53)	−0.306 (−0.55)	−0.274 (−0.51)	0.329 (2.42) [†]	0.308 (2.12) ^{**}	0.261 (1.71) ^{**}
Board controls						
Board size	−0.023 (−0.49)	−0.023 (−0.48)	−0.026 (−0.53)	0.038 (3.60) ^{††}	0.038 (3.23) ^{††}	0.043 (3.83) ^{††}
Board ind. ratio	0.073 (0.22)	0.072 (0.21)	0.063 (0.19)	−0.195 (−1.02)	−0.198 (−1.01)	−0.301 (−1.47) [*]
Firm controls						
Log (revenue)	0.137 (3.96) ^{††}	0.137 (3.94) ^{††}	0.131 (3.68) ^{††}	0.116 (2.97) ^{††}	0.112 (2.72) ^{††}	0.089 (1.78) ^{**}
ROA	−1.052 (−1.15)	−1.100 (−1.16)	−1.165 (−1.26)	−0.571 (−0.72)	−0.673 (−0.83)	−0.600 (−0.69)
Institutional controls						
Institutional quality index	0.993 (2.87) ^{††}	0.997 (2.85) ^{††}	1.006 (2.88) ^{††}	0.582 (3.36) ^{††}	0.591 (3.45) ^{††}	0.952 (1.34) [*]
Ownership						
Corp. block own	0.001 (0.28)	0.001 (0.28)	0.001 (0.28)	−0.003 (−1.76) ^{**}	−0.003 (−1.72) ^{**}	−0.003 (−1.49) [*]
Family own	−0.002 (−0.80)	−0.002 (−0.82)	−0.002 (−0.84)	−0.001 (−0.82)	−0.001 (−0.93)	−0.001 (−0.98)
State own	1.06E-04 (0.04)	3.00E-05 (0.01)	1.52E-04 (0.05)	−0.004 (−1.22)	−0.004 (−1.23)	−0.002 (−1.28) [*]
Foreign partner own	0.006 (0.38)	0.007 (0.39)	0.009 (0.48)	−0.015 (−3.62) ^{††}	−0.013 (−2.62) ^{††}	−0.012 (−2.03) ^{**}
Country fixed effects	No	No	No	No	No	Yes
F-test	1.752 (0.00)	1.587 (0.00)	1.618 (0.00)	4.424 (0.00)	3.708 (0.00)	3.372 (0.00)
Observations	60	60	60	60	60	60
Adjusted R ²	0.1308	0.1129	0.1181	0.4300	0.4077	0.4198
Adjusted R ² (over control variables only)		−0.0179	−0.0127	0.2992	0.2769	0.2890

Notes: (1) *T*-statistics are in parentheses. (2) White cross-section standard errors and covariance (d.f. corrected).

Bold indicates value is greater than zero.

* $p < 0.10$.

** $p < 0.05$.

† $p < 0.01$.

†† $p < 0.005$.

institutional differences across sample group countries. In terms of ownership controls and pre-IPO state ownership has a positive and statistically significant relationship with IPO prospectus length underlining the importance of the role of the state in privatizations across the SSA regions capital markets. However only after the application of country fixed effects does a positive relationship between family ownership and IPO prospectus length and a negative relationship between foreign partner (MNE) ownership and IPO prospectus length attain statistical significance. It is notable that following the application of country fixed effects to take account of unobserved heterogeneity across countries that the explanatory power of the model increases to

over 30% from that of the model 7 where only the controls are included with no country effects.

The evidence from the North African sub-sample (in Table 4) reveals a general lack of any credible support for hypotheses H1 and H2. However as in the case of the earlier larger pan-African sample, there is a similar lack of statistical significance at 90% confidence level in the relationship between ratio of social elite (high society) directors to board size and IPO prospectus length while this relationship is positive which is inconsistent with the anticipated direction of relationship in hypothesis H3. Furthermore the inclusion of this variable individually in model 16 causes a dramatic increase in explanatory

power over and above that attributable for controls of 29.92% inferring some importance for the ratio of social elites within the board in terms of information disclosures. One likely explanation of this positive relationship between social elites and IPO prospectus length, in terms of increased information disclosure, is that the business and institutional environment of North Africa is fundamentally different from that in SSA. In particular a greater concern for investors in the North African region is the separation of ownership (cash flow rights of the firm) from control (voting rights) which is especially prevalent in family controlled or influenced firms often inducing the extensive use of cross-shareholdings between associate or related firms and extended pyramidal networks (Claessens et al., 2000). In particular the separation of ownership from control is closely associated with enhanced ability of families to engage in expropriation (Claessens et al., 1999). In this light the increasing presence of social elites on boards within the North African region are more likely to both signal quality to investors, through social elites connection to secular governmental institutions, as well as in their promotion of enhanced information disclosure through their desire to attract foreign investment given the regions markets close proximity to Europe (Hearn and Piesse, 2010a,b). These arguments are also reflected in terms of the relationships between the controls and IPO prospectus length where there is a persistent negative relationship between family ownership (pre-IPO) and IPO prospectus length although this only just lacks statistical significance at the 90% confidence level. The inclusion of the ratio of social elites to board size variable also causes board size to attain a positive and highly statistically significant relationship at 99–95% confidence level and the negative relationship between board independence ratio and prospectus length to attain statistical significance at 90% confidence level following application of country fixed effects. Equally the inclusion of ratio of social elites to board size variable causes the positive relationship between IPO prospectus length and technology/telecommunication industry control to attain statistical significance as well as between prospectus length and financial industry which attains a high degree of statistical significance (over 99% confidence level). It is notable that the relationship between IPO prospectus length and the aggregate institutional quality measure is positive and highly statistically significant (over 99–95% confidence level) for all models and retains its significance following application of country fixed effects. This would underscore the relative importance of institutional quality in the North African region in contrast to its SSA counterpart in terms of the impact of institutions in safeguarding an environment for external finance. The combination of narrow political economies and small formal economic sectors in SSA markets would infer that the impact of institutional quality in safeguarding external finance is not as great as that in the more developed North African region. Finally the differences in direction arising in relationship between state ownership and IPO prospectus length, where this is negative in North Africa and positive in SSA, underscores the differences in role of state and its role in financial markets between the two sub-regions. In particular this would underscore the very different role and incentives of the state between the two regions in promoting disclosure and

protecting information acquisition by minority outsider investors where the role of the state is more likely in SSA in response to privatization initiatives by international financial institutions with the ostensible development policy goal of attracting more foreign outsider minority investment.

5. Conclusions

This study performs a unique analysis into the board level governance determinants of the length of IPO listings prospectuses across a comprehensive sample of 165 IPO firms from across the African continent between 2000 and 2011. The length of IPO listings prospectuses is a social construct and the product of the national formal institutional environment and enforcement mechanisms as well as more pervasive informal institutions reflected in the cognitive decision processes of individual directors and in particular nonexecutives charged with monitoring and ensuring informational transparency for external minority investors.

After controlling for a variety of firm-level, ownership and institutional controls I find evidence of significant differences in the impact of the proportion of directors that are from civil code as opposed to common law countries of origin on IPO prospectus length. Increasing proportions of foreign directors from civil code law countries is inversely related to IPO prospectus length while the opposite effect is found for their common law counterparts. While these relationships are found in the overall African sample they also hold across SSA but are notably absent in the North African sub sample. It is likely that a combination of small underdeveloped markets for external finance in SSA together with an often incongruous and unsupportive institutional environment accentuate the contrasting impact of directors from either civil or common law backgrounds. This is especially likely given the prevalence of foreign directors associated with joint ventures between local firms and foreign partners in SSA, a feature that is rare in North Africa, and the importance of foreign directors in signalling high quality to external investors. However in contrast to the lack of importance of foreign directors in the North African region, increasing proportions of directors from social elites is positively associated with IPO prospectus length. The impact of social elite directors in SSA by comparison is insignificant. There are two possible explanations for the increasing IPO prospectus length and amount of disclosure in relation to increasing proportions of social elites on board in North Africa. The first relates to the importance of reputation and disclosure within classical Islamic contracting which is centred on the notion of partnership and which underscores the informal institutions and societal matrices across the Maghreb region. However the second is more plausible in relating to the Maghreb region being dominated by large extended family networks with control vested in state machinery, such as polity, governmental, legal and judicial bureaucracy, as well as business environment. These extend their control through pyramidal networks and extensive cross shareholding between affiliated firms resulting in considerable separation of ownership and control. In the light of this dominant governance model across the region there are considerable incentives in attracting minority

external investors given the formidable potential for expropriation through this governance mechanism.

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